

Eubios Journal of Asian and International Bioethics



EJAIB Vol. 32 (5) September 2022

www.eubios.info

ISSN 1173-2571 (Print) ISSN 2350-3106 (Online)

Official Journal of the Asian Bioethics Association (ABA)

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Editorial: Bioethics and Sustainability-

More than a decade after the completion of the Global Decade of Education for Sustainable Development (ESD), and a few decades after the first World Environment Conferences that introduced the term sustainability, can we really say that our world, and the practices that we engage in, are sustainable? As we can see from increased activism to call upon the urgency of policies and practices to stop human made climate change, we realize that these young people are the grand children of the young people who first campaigned for sustainable futures. How many generations is enough? Schumpeterian dynamics suggests a paradigm shift often takes several generations, and we can certainly see that in the concepts of sustainability. These are much more than just environmental issues, including social

sustainability. How do our ethical choices and decisions affect the impact that we have on other people, the environment and the future?

After many months of the war in Ukraine I am still in disbelief given the very rich philosophical and literary traditions of Russia, but sadly every culture has had times of evil aggression. Perhaps we have to admit that war is something which human beings seem to repeat forever, even more than love forever. How can we thrive on the suffering of others? The importance of new solutions is explored in the first paper in this issue on anthropo-symbiotic ethics. The next paper on occupational stress reflects on something which not just facing civil engineers, but is facing all those who work in industry. The paradox of road construction continues, and thirty years ago I published a paper on the ethics of transport choices. We use cars and roads, even if we're shifting to electric vehicles, and we need transport systems to bring people to different places. Perhaps the lesson of the pandemic that we can work from home more is going to reduce some of the traffic.

On the other hand bringing people to different parts of the world is a way to overcome conflicts, and a case study by the Lataza brothers looks at conflict resolution in the Philippines. Is a sustainable culture of peace enhanced by communication and exchange between people? We hope so.

The last paper is a medical ethics issue and we are all very blessed by having access to intensive care units (ICUs) but what happens once we leave the ICU and go to other parts of a hospital, medical or social system? Japan has a good health insurance and social insurance system, but I can see in some parts of United States that once you leave hospital, you're back on the streets, literally, with only voluntary organizations to help you, if anybody. As we have an aging population, we need to have greater integration of social services and medical services into the holistic care approach' Let's hope that we really can move forward with the reflections on these and other papers in endeavors to make a sustainable society. - Darryl Macer

Anthropo-symbiotic ethics: a path to the sustainability of life

Luis Fonseca, Guilhermina Rego, Rui Nunes
Faculty of Medicine, University of Porto, Portugal
Email: luisoliveirafonseca@gmail.com

Abstract

The moral status of humans, animals and nature has been widely debated. Several theories have been trying to answer to the ethical challenges that arise in the relation between these three entities. Although there are models with conciliatory views, none seem to have been sufficient to reach a broad consensus on the moral hierarchical positioning of human beings, animals and the environment. Here we propose a conceptual framework of an anthropo-symbiotic ethics to respond, in the most realistic and thoughtful way possible, to the moral obstacles often placed in the context of the Humans-Nature-Animals interaction.

Introduction

The earth is about 4.5 billion years old [1] and *H. Sapiens* evolved from other human species that inhabited Africa 200,000 years ago [2]. The disparity between humans' and planet's age is therefore substantial. The latter, along its journey, was affected by several catastrophes but always regenerated with viable conditions for Life. Thus, the common rhetoric that Earth needs salvation is, in fact, a fallacy. Humans are the ones who are at risk of extinction due to climate change. Earth, if mankind persists attacking it, will most likely continue to exist, renewing itself as it has been doing for billions of years.

After its birth, 200,000 years ago, *H. Sapiens* spread throughout the world and lived an animalistic existence until the Neolithic revolution and the emergence of the first civilizations in Mesopotamia, Egypt, India, and China. At this time, about 10 to 12,000 years ago, the species' culture changed profoundly. Its nomadic way of life, based mostly on hunting groups to facilitate survival, gave place to a sedentary model with agriculture and villages as its pillars. This was the beginning of organized social, economic, political and religious systems that led to a significant growth of the population. This increase continued until today and has been responsible for the scarcity of natural resources, the destruction of habitats, deforestation, environmental pollution and the questionable exploitation of various animals [2]. Humans have evolved from an animalistic past to become the most intelligent, dominant and populous species that has ever inhabited Earth. However, notwithstanding its unique cognitive evolution, several of its most biological primal instincts subsist.

The current environmental imbalance promoted by humanity is a serious threat to the sustainability of life and requires an urgent response. We believe

that a symbiotic ethics, in which mankind is at the top of the moral hierarchy, can make a decisive contribution to the problem.

1. The concept of humanity

In contemporary occidental societies there is a general predisposition towards an excessively idyllic vision of the world and the human being. On the one hand, *H. Sapiens* is unrealistically seen as a species innately endowed with pure goodness and, on the other hand, subsists a primacy of the beautiful over the ugly (in the aesthetic and moral sense of life), camouflaging aversive conditions such as violence or cruelty.

There's also a tendency for "psychiatrization" of emotions, such as sadness or anxiety, and personality traits, such as malice. However, negative emotions, such as sadness [that induces crucial internal and/or external changes to cope properly with a distressing event] have important phylo- and ontogenetic functions. Their role in the survival of the species and in a person's harmonious development is unquestionable. Also, evil is not exclusive of any psychiatric disorder. It exists as an independent personality trait, such as being funny, kind or introverted. In fact, there's a recurrent difficulty and resistance in accepting that certain atrocities are simply a cruel act, without any underlying disease. People often show surprise regarding the monstrosity of certain human behaviors, asking themselves "how was it possible?" and stating that the perpetrator "couldn't be right in the head to have done something so grotesque and impious", insinuating a psychiatric illness as a causal factor. This frequent, automatic and unconscious need to consider these perfidious actions pathological may serve the purpose of preserving the person's sanity through a mechanism of denial, which obliterates the awareness that a human being (the person herself) is capable of such barbaric behaviors. We often define an altruistic demeanor as of great humanity and a malicious action as pathological and/or of shocking inhumanity. But, what to think of monsters like Hitler or the cinematic serial-killer Hannibal Lecter? Are they not simply the embodiment of pure human evil (part of mankind's eternal dichotomous nature)? Otherwise, what does the devil symbolize? Evil (character) or psychopathy (disease)?

The ordinary recognition of the word humanity as a synonym of benevolence distorts its true meaning. Human nature is dichotomous and gravitates in a spectrum between two extremes, evil and goodness. Thus, being human includes the whole package, that is, everything we have of good and bad. It would be of great importance for humanity to recognize its true nature without subterfuges of any kind. Otherwise, unrealistic solutions for several issues will keep being presented and the disagreement between human, animal and environmental ethics will remain unsolved.

2. Aggression and violence: man vs. animals

The similarity (in varying percentages) between human and other animals' genome [3,4], as well as the shared, to a greater or lesser extent, brain structures (e.g., brain stem, cerebellum or limbic system) with other species (even with some phylogenetically distant) [5], supports Darwin's theory of evolution. Therefore, mankind and animals share common characteristics, including certain behavioral patterns. Darwin in "The Descent of Man and Selection in Relation to Sex" defended that "the difference of mind between humans and the higher animals, however great, is certainly one of degree and not of species". Thus, if, on the one hand, certain animals can, after all, be endowed with some degree of rationality (usually assumed to be an exclusively human capacity), on the other hand, it will also be no less true that certain more primary behaviors (such as aggression), usually negatively connoted as animalistic, are an inalienable part of humans' nature.

According to a study published in Nature [6], humans have a phylogenetic propensity for violence and those species (*H. Sapiens* included) with territoriality and social behavior traits are more aggressive. Also, the level of lethal violence increased as humans evolved from their ancestral trunks. Nevertheless, political and social organization of mankind appear to have diminished this aggressiveness, which suggests that culture can shape the inherited inclination towards violence. In turn, the aggressive phylogenetic trend over time may be justified by its apparently high evolutionary benefit [7].

The lower degree of violence and conflict in contemporary societies is due not only to a greater capacity of containing such instincts by social systems based on rules, and from which collective and individual advantages arise, but, above all, to the generalization of democracies as regimens that give space for freedom, autonomy, diversity and individual merit. In fact, history teaches us that autocracies, sooner or later, by cornering and stifling individual's freedom and legitimate aspirations end up imploding.

As far as animals are concerned, it is important to emphasize that they also exhibit gratuitous violence (evil) and deviant behavior [8,9,10]. For example, 10% and 17% of deaths in groups of yellow mongooses and certain lemur species, respectively, result from lethal violence not related with any imperative of survival [11]. Thus, it's not true that animals are exclusively candid and innocent and all their aggressiveness stems only from the need for survival. In the film "Dawn of the planet of the apes", Caesar, the leader of the simians, after having known that the war had been maliciously incited by an ape, said to the human: "I always thought we were better than humans, but now I see how much alike we really are." Furthermore, George Orwell, in his dystopian book "The Triumph of Pigs", describes a gradual intellectual and behavioral transformation of

an elite of animals into the humans they so abhorred. These artistic works allude to the possibility that the acquisition of complex and unique cognitive abilities by any other species would, most likely, result in a human-like way of being and acting. Indeed, considering the theory according to which the difference between *H. Sapiens* and other animals is more of degree than of quality, a dichotomous nature (endowed with a behavioral spectrum between two extremes, evil and goodness), seems to be common to both rational and irrational beings of the animal kingdom. It's very important to have this realistic conception, otherwise a Manichean vision between humans and animals can prevail and block the opportunity to create a judicious ground for a consensus on ethical matters involving both and the environment. The power of *H. Sapiens* gives him great responsibility in preserving the balance that makes life possible. But it can be difficult to resist the latent biological pressure for violence that, throughout evolution, has been an advantage for the dominant species. Only by facing the world as it really is, without taboos, prejudices and utopian ideals, we can accomplish meaningful changes.

3. Dystopia of perfection

The incessant and unrealistic demand for an alleged perfect regime by various political and social organizations grossly ignores human nature and its idiosyncrasies. Dystopias, however well-intentioned they may be, are, in essence, despotic, so the construction of societies based on absolute control under the pretext of a supposed greater good, such as generalized well-being, is condemned from the start as it won't respond to the vicissitudes and the diversity of human action and thought. Since the mid-twentieth century, where the paradigm of autonomy became dominant, most humans are not willing to abdicate freedom. Few, if any, like to feel trapped, cornered, or forced to embed other people's ideals and ways of living that they don't share. Human history and literature have already shown us this. In their books "Brave New World" and "1984", Aldous Huxley and George Orwell, respectively, reflect brilliantly and lucidly on human nature and question control and individual freedom deprivation as proper paths to functional and peaceful societies.

Only by not smothering diversity and promoting education of fundamental human rights from an early age, underlining the importance of respecting difference, it will be possible to reach a consensual ground from which a judicious ethics emerge and tackles properly the problem of the sustainability of life. Cancel cultures, or other similar prohibitionist and authoritative movements, will never be a balanced, realistic, plural, solid and temporarily tenable solution.

4. Contempt for the bottom of the iceberg

Most of the proposed solutions for environmental problems and the sustainability of the diversity of life focus on a reactive approach, ignoring the

“bottom of the iceberg”, that is, the need for structural reforms to change the humans’ way of thinking and acting. Taking the pollution of fossil fuels as an example, for years it was repeatedly emphasized that the main solution would be the replacement of diesel and gasoline vehicles by electric-powered fleets. This narrative has been adopted by various sectors of society (politicians, media, etc.) as a kind of inevitable and miraculous solution that would decisively contribute to the mitigation of climate change. It was “naively” or deliberately ignored that, in fact, what was being proposed was the replacement of a source of pollution by another, perhaps, even more serious. Today, fortunately, public opinion is more aware that the methods for producing electricity (dams, wind turbines, etc.) [12], the exploration and acquisition of raw materials for the construction of electric vehicles (e.g., mining, such as lithium) and the impossibility of recycling their components (e.g., batteries) [13] are highly harmful to biodiversity [14]. The environmental degradation secondary to the exploitation of ores for the messianic “green energies” can have serious consequences for public health and even force the evacuation of villages from contaminated areas [15].

The obsessive focus on replacing fossil fuels with electricity, without clear environmental benefits in the way it is proposed, has masked a huge number of other problems whose negative impact on the environment is significant. The current economic model [based on valuing animals and environment-derived raw materials (e.g. skins and wood, respectively)], deforestation (e.g. promoting contact with vectors of microorganisms harmful to humans and destroying the Earth’s “lungs”), irrational consumerism (which incites the unbridled, repeated and unnecessary purchase of the most diverse frivolities, such as electronic devices), overpopulation (and the inevitable pollution and resources scarcity increases) [16], unbalanced diets [stimulating the exaggerated consumption of meat or proposing an exclusively plant-based diet, which is also harmful to public health and the environment (intensive agriculture; transgenic foods)] or the focus of medicine on treatment instead of prevention are some of the upstream problems that are not properly addressed. Several, like the need to discuss overpopulation and birth control, are taboo subjects or simply disregarded because they have no short-term impact. Of course, in plural societies, based on a primacy of autonomy, an imposing culture is not at all desirable. However, there are solutions that, although not immediately consequent, would certainly contribute to profound positive changes in the medium and long term, such as early and continuous education policies, promoting respect for individual freedom, cultural diversity, biodiversity and intergenerational solidarity. This is how evolved societies can be built, based on a developed literacy and a culture of transparency and demand, with clear individual and collective benefits.

5. The origin of morality

One of the biggest and most relevant questions in philosophical ethics is the moral status of living beings and things and their intrinsic or extrinsic value. It is important to know what moral status is. According to the *Priberam* online dictionary, status refers to a “law”, “rule” or “condition of a person or entity”, moral derives from the Latin *moralis* and means habits, customs or traditions and morality designates the expression of judgments that classify decisions, and the resulting behaviors, as good/correct or bad/wrong. Thus, an individual or an entity can be said to have moral status if its relevance to society requires that its interests are always considered and safeguarded. However, it should be noted that morality is dynamic, that is, it varies over time and with cultures, so it is a Herculean task (if not even impossible) to unanimously determine a Common Moral that serves everyone and everything.

Therefore, bioethics (and ethics in general) has, as a science, sought to follow the constant social, scientific, epistemological and technological transformations and to provide societies with principles, reflections and moral solutions suited to the most varied human and mundane idiosyncrasies of a world in permanent metamorphosis. There are not, and presumably never will be, perfect, unanimous, and universal moral solutions. However, it seems feasible to reach a broad consensus, albeit with room for dissension, regarding the sustaining moral foundations, at a certain point in time, of a civilizational harmony within the multicultural space that is the current world. For this, it is essential to recognize morality as an ethical judgment of mankind, resulting from its capacity for reflective and philosophical thinking and, therefore, non-existent outside its internal space. So far, there is no evidence that any other species is endowed with the ethical-philosophical and critical thinking of human beings. Thus, the intrinsic or extrinsic value of living beings and things will be the one that mankind gives them. In all ethical theories dedicated to the subject, the moral value of the environment, humans and/or animals results solely and exclusively from the attribution and moral connotation of the proponents of those theories. In these circumstances, if the positions taken by the different currents are too rigid, emasculating the space for questioning and debate and undermining any possibility of consensus, irreconcilable worldviews and irresolvable conflicts will emerge.

6. Anthro-symbiotic ethics

Ethical theories with a more conciliatory and balanced view about the relation between the environment, humans and animals still have two important limitations.

The first is considering an interdependence between the environment (or the planet, if you will) and mankind (Earth ethics and Ecosophy). However,

it is mankind who, for the moment, is dependent on Earth, insofar as he cannot abdicate the preservation of viable conditions to survive. Planet Earth, incomparably older than humanity, has always regenerated throughout its billions of years of existence after several catalytic events. Perhaps the illusion of immortality, which daily permeates human thought, wrongly instills in mankind the presumption of indispensability. In the future, with space exploration, it may even happen that humans settle in other planets and Earth becomes, then, expendable, losing its inestimable value. However, for the moment, it is essential that *H. Sapiens* recognize, without subterfuge or delusional rhetoric, his insurmountable dependence on the planet. Failing to do so will most likely maintain the current course of action towards extinction.

The second limitation of “conciliatory” theories is placing mankind at a level of moral status superimposed on other species and the environment. Now, this situation immediately poses a difficulty: it does not recognize the undeniable evolutionary supremacy of the human being. Even the most radical animalistic or environmental theories, with a pessimistic view of humanity, identifying it as the main villain of animal and environmental destruction, recognize *H. Sapiens*, also, as the only species capable of changing the course of events. It should be noted that the architects of these theories are not trees or animals, but humans, so the moral hierarchy they elaborate corresponds to their internal ethical judgment and not to an inalienable physical rule. Any dominant species, considering the evolutionary advantage of animal aggressiveness [7], would hardly accept attributing itself an equal (or inferior) moral status. Thus, it seems to us that a realistic solution would be to embrace an anthropo-symbiotic ethics. In this model, the indispensability of a fruitful and mutually advantageous relation between mankind, other species and the environment is recognized. However, mankind’s superior moral status is unquestionable, and the final goal of such relations is human well-being (figure 1.) Humans (as the cognitive “sum”), invest in a sustainable way in the environment and in animals (seeking that they also benefit from the investment) in order to reap the best possible gains. In extreme situations, which require a choice between environment, animals and humanity, the best for *H. Sapiens* should, in principle, prevail (minimizing, as far as possible, the cost to animals and the environment). It is unrealistic to think that a species with the domain and cognitive potential of human beings, which permanently challenge the limits of Existence and the cosmos, will not assume a superior moral status in the cycle of Life. We believe that it is only based on this assumption that a favorable ground can be built for a substantive agreement that faces environmental challenges and, at the same time, responds, in the most thoughtful and pondered way possible, to the various ethical dilemmas and conflicts that arise in the dynamics of

the relation between mankind, animals and the environment. An anthropo-symbiotic ethics recognizes human cognitive superiority, the dichotomous nature of mankind and animals, the evolutionary human domain and the indispensability of a long-term association between systems of different nature where, in principle, the well-being of human beings is the ultimate purpose. It also accepts that exceptional dilemmatic situations may occur where mankind is neglected in relation to animals and nature. Imagine, for example, that a person would have to choose between saving the life of Adolph Hitler or his faithful pet dog. What would be the most morally acceptable choice?

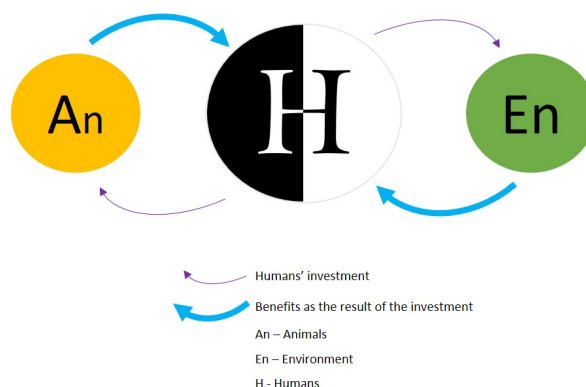


Figure 1: Conceptual model of anthropo-symbiotic ethics

Conclusion

The emergence of several ethical issues in the context of the relation between mankind, nature and animals can have a perverse effect and create an even more divisive and conflicting culture between different currents. The defense of similar moral plans for all is incongruous with the human and animal nature, with the evolutionary dominance of some species over others and with the internal human origin of morality. Aggression and conflict are important in maintaining the balance of ecosystems and their biodiversity. What would it be like if, for example, we attributed to animals the same intrinsic value as *H. Sapiens*, advocating that it would not be legitimate to kill them for food or interfere with their reproductive autonomy? What if, in this context, under a principle of absolute respect for animal life, the human being abolished the consumption of meat (and fish, by the way) by all carnivores and omnivores and replaced it with other equally nutritious food? Wouldn't this unbalance ecosystems? And if nature also had an intrinsic value similar to humans, how would we solve the dilemma of having to destroy an entire forest to save a human being? What if we had to choose between letting our neighbor (a normal, compliant man, but with whom we have no relationship) or our pet die? Placing

animals and nature on a moral plan similar to human beings would, therefore, add more confusion and arbitrariness in the face of different moral dilemmas, even assuming that, in fact, it is very unlikely that there is an entity with an intrinsic and absolute moral value under any circumstance. The inviolability of human life enshrined in the Constitution of the Portuguese Republic is a good example of this. Is it morally reprehensible to kill in a war or in self-defense? On many occasions, there will never be immaculate ethical judgments. However, this does not dispense the establishment of a consensual moral hierarchical chain that, recognizing humans at the top, mitigates the whim in the field of moral decisions, making them as thoughtful and pondered as possible. Within the scope of an anthropo-symbiotic ethics, there will also be room for freedom, for divergence of opinion and for a healthy human competitiveness. No animal, humans included, likes to feel cornered or diminished in the importance that the evolutionary domain gives it, so it is necessary, within societies, to guarantee the right to individual autonomy and to avoid, as far as possible, imposing and prohibitionist cultures. History shows evolution is a machine fueled by cognitive capacity and impossible to stop. We could even question what all the human intellectual potential would be for if one abdicated, by choice, from discovering the secrets of life and the cosmos (would it be acceptable to dispense animal's studies and the use of raw materials from nature, giving up the discovery and the development of curative therapies for the most diverse diseases of *H. Sapiens*?)

At last, there are those who defend, with greater or lesser vigor that humans should refrain from interfering with the "natural order" of life. But what is the "natural order"? If there's one thing Darwinism taught us is that there is no predetermined design. And, for those who believe that there is, who can outright deny that humans' interference in Life is not part of that predefined purpose? The natural order will depend on the relation between the physico-chemical circumstances of the cosmos, the interactions between the various forms of life and the course of action of the dominant species.

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Occupational stress experiences of civil engineers in the implementation of road construction projects

- *Teodoro M. Momo, Jr.*

Department of Public Works and Highways
Engineering District, Digos City, Davao del Sur

- *Amelie T. Bello, EdD, RGC*

Institute of Graduate and Professional Education,
Davao del Sur State College, Digos City, Davao del Sur
Email: amelie.bello@dssc.edu.ph

Abstract

This study explores the occupational stress experiences of civil engineers in the implementation of road construction projects, highlighting the day-to-day experiences as well as their coping mechanisms in the performance of such tasks. There were 12 informants composed of design engineers, project engineers, materials quality control engineers and supervisors who underwent in-depth interviews. Constant comparison technique of Moustakas (1992) was used to treat qualitative data. Civil engineers' cause of stress was related to the organization's mandated targets and contractor-related issues. These stresses affect largely their work performance and personal mood and emotions. Thus, they found coping mechanisms by keeping abreast of their functions and consider stress as a normal occurrence in their jobs, have an effective feedback approach, and treasure the role of the family. Occupational stress happens when there is a mismatch between the requirements of the role, capabilities and resources and supports available. However, with positive workplace, culture may contribute to attaining and managing stress free workplace. The results of the study imply that the employer needs to come up with a program which could ease the effect of the stressors among employees. Setting of expectations, determining favorable deadlines, having open communication, setting the targets, and peer support should be considered. Employer needs to consider also that stress lessens production and performance.

Introduction

In today's work life, employees are working for longer hours, as the rising levels of responsibilities require them to exert themselves even more strenuously to meet rising expectations about work performance. Occupational stress is the adverse psychological and physical reactions that occur in an individual because of their being unable to cope with the demands being made on them. Moreover, work related stress has been a topic that has received increasing attention, in occupational health, over the last three decades. These authors believed the world, especially the world of work and business, has become increasingly subject to fast changing forces

like increased competition, the pressure of quality, innovation and an increase in the pace of doing business. The demands on employees grew equally dramatically and this created stress within employees. Apart from stress that arose from the work situation, other sources of stress could relate to personal factors such as relationships with others and use of free time.

Ongori and Agolla (2008) mentioned that The International Labor Organization (ILO) reported that inefficiencies arising from occupational stress may cost up to 10 percent of a country's GNP. Occupational stress includes perceived loss of job, and security, sitting for long periods of time or heavy lifting, lack of safety, complexity of repetitiveness and lack of autonomy in the job. In addition, occupational stress is caused by lack of resources and equipment; work schedules (such as working late shifts or overtime) and organizational climate are considered as contributors to employee's stress. Occupational stress often shows high dissatisfaction among the employees, job mobility, burnout, poor work performance and less effective interpersonal relations at work.

In the United States, the number of stress claims has trebled in the last year with 15 percent of all workers compensation claims being for stress. The cost to organizations of this level of occupational stress lies anywhere between 200 and 300 billion dollars per year because of high staff turnover, increased health and workers' compensation claims and decreased productivity (Kendall, Murphy, O'Neill, & Bursnall, 2000). In addition, recent figures emanating from Britain have indicated that 70,000 workers are absent from work due to occupational stress every year (Kendall & Muenchberger, 2009), costing the nation around seven billion pounds in lost productivity, worker entitlements and health care. A subsequent result of these factors is the loss of 40 million working days per year (Shergold, 1995). Stress is a universal element experienced by employees around the globe. Stress has become major problem for employer particularly in developing nations where the employer doesn't realize the impact of stress on employee performance which ultimately results in critical managerial dilemmas. Giga and Hoel (2003) concluded that high rates of mergers, acquisitions, increasing economic interdependence among countries due to globalization, technological development, and restructuring have changed the organizational work over the last few decades and have resulted in time pressure, excessive work demand, role conflicts, ergonomic insufficiencies and problematic customer relationship which are causes of stress.

In the Philippine settings, health problems among supervisors in manufacturing industries are associated with occupational stress. Work among supervisors was reported to be challenging and stimulating but regular upgrading of skills was needed. Based on the personal interviews conducted

among the supervisors, the issues in the workplace included information overload, keeping abreast with developments in their fields of expertise, the need to be multi skilled, stress brought about by information technology, the new pedagogy in the workplace affecting occupational stress, stringent computer-based supervisory monitoring, and the need for new organizational strategies. Lu and Prokopenko (2012) mentioned that occupational stress among supervisors was found to be significantly associated with heavy load stress, mental requirements of work, massive technical/office work, and the use of microelectronics equipment needing concentration and literacy in it, and regular upgrading of skills.

In the local setting, developing research environment was still evident specifically in the Department of Public Works and Highways. Thus, no research information was retrieved about the conduct of the same nature of the study within the locale. As to need to do the research, the office is not exempted with stressful situations: rendering overtime (extended time to 9 PM during regular days, weekends and holidays) specially during last semester after the release of National Expenditure Program (NEP) just to cope up with the deadlines in preparation of Preliminary Detailed Engineering (PDE); requiring all projects to be bid out in the months of November and December in the case of design engineers of the Planning and Design Section; to cope up the expiration date as indicated the contract in the case of Project Engineers and Materials Engineers in Construction Section, Maintenance and Quality Assurance Section, and the likes. The mandate of the office has been made clear and ensured to be in utmost transparency, heralding the Department to shun corruption practices and improve its efficiency.

With high regards to this context based on the global phenomenon on occupational stress which effect was determined and was known to both global and international, this study was conducted to examine the situations that may influence the occupational stress and its role to the productivity of the Department of Public Works and Highways (DPWH) employees in Davao del Sur District Engineering Office.

Objectives of the study

This study aimed to identify the occupational stress experiences of civil engineers in the Davao del Sur District Engineering Office in the implementation of road construction projects. More specifically, this study aimed to determine the effects of this occupational stress in the effective function of project implementation in the district; and to explore the coping mechanisms of civil engineers to keep abreast of their functions despite occupational stress.

Significance of the study

This study would be beneficial to the civil engineers who play the role of project implementers and

supervisors in road construction projects. This would provide enlightenment to a perspective nature of occupational stress at work and the factors that might explain why these happen. Thus, it would help improve the leadership and management of various public works and highways offices based on the identified probable factors as basis for policy revisit and institutional development. This study is also important for policy analysts, particularly those working for the government under the helm of Civil Service Commission to look on the stories of project implementers relative to encountered occupational stress in doing their job. This could be a valuable input in establishing programs relative to addressing occupational stress, which is correlated to red tape, declining productivity, and low engagement.

Scope and limitation of the study

This study was focused on the occupational stress experiences of the civil engineers who are in charged on the implementation of road networking projects in Davao del Sur. It also touched the perceived effects of these sources of occupational stress as well as the consequent coping mechanism to do away with the stringent effects of stress at work. The focus was on the project implementers: Design Engineers, Project Engineers, and Materials Engineers of the chosen public works and highways offices. The focus was to draw out the experiences of these personnel through a qualitative approach.

Methodology

This study made use of a qualitative method and was exploratory in nature; thus, any facets of information derived were all fluid, subjective, and given from the perspective of the participants and based upon their understanding. Jackson, Drummond, and Camara (2007) mentioned that qualitative method is primarily used to understand human beings' experiences in a humanistic approach. Bontuyan, Luspo, Salazar, and San Jose (2013) on the other hand said that qualitative method is used to describe 'the struggle and triumphs' of individuals in their day-to-day encounter; likewise, San Jose, Bahket and Alsalhi (2017) averred that it used to reveal personal experiences and insights. Thus, qualitative method is appropriate to this study because it focused on the individual and collective experiences of the civil engineers. Personal accounts on struggles and triumphs in the jobs were also considered.

This study was conducted in order to gain understanding of the occupational stress experienced by project implementers and supervisors through their day-to-day experiences at work. The qualitative research explored and described how these experiences affect their work, their personal life, and the dynamics at work under the helm of Civil Service Commission rules and regulations. The research technique used was a modified Van Kaam method (Anderson & Eppard, 1998) based upon recorded and transcribed interviews using in-depth interview questions to

capture the day-to-day experiences of civil engineers.

Sources of data

The target participants of this study were the 12 civil engineers from the Davao del Sur District Engineering Office. There were four supervisors, four project engineers, three design engineers, and one materials engineer who served as participants of the study. These personnel were assigned in the Planning and Design Section, Construction Section, Quality Assurance Section, and Maintenance Section.

Samples of potential participants represent the target population of interest, with the sampling frame comprised of the population from which the sample was drawn (Neuman & Kreuger, 2003). The informants were purposefully and conveniently chosen so that the information needed to expedite the study would be the exact data necessary to answer the research questions posted in the earlier part of this paper. Convenient sampling was used in getting the 12 informants. A focus group discussion involving the same number of different participants was conducted to draw coherence on the individual interviews. Creswell and Creswell (2017) addressed the issue of the appropriate number of participants in qualitative research participants expected to provide thematic saturation of the experiences. However, San Jose (2012) pointed out that due to the limited number of the participants, the findings of the study cannot generalize the entire instead results can only be applicable to the involved participants.

Research locale

This study was conducted in DPWH Davao del Sur Engineering District which composed of four (4) sections directly involved in project implementation namely: Planning and Design, Construction, Quality Assurance, and Maintenance section.

Data gathering procedure

Many factors were involved in the consideration of appropriate research methods for data collection and instrumentation (Anderson, 2003). The factors include the need for data from subject matter experts based upon the day-to-day experiences and varied perspectives from diverse participants. Creswell, Plano-Clark, Gutmann, Hanson (2003) identified observations, interviews, documents, and audio-visual materials as forms of data collection. The use of unstructured observational data in different venues as a participant observer or non-participant observer is not available and precludes the opportunity to take field notes or to record data to inform the research. Elliott (2005) mentioned that the most appropriate and available data collection method to achieve data validity and reliability in the target population frame is the in-depth interview.

In this study, face-to-face interview using semi-structured questions was used to provide the most appropriate instrument to understand the central phenomenon of occupational stress in the

perspective of project implementers and supervisors. Further, a focus group discussion was organized, which added some cooperating personnel, contractors and some project inspectors, in order to corroborate the qualitative data analysis on the in-depth interviews. The focus group discussion served as a way to triangulate the analysis so that other factors would surface, which gave weight or credence to the statements of the participants in the prior in-depth interview. Finally, the researcher also observed non-verbal forms of communication such as gesture, reaction or mannerisms exhibited in face-to-face personal interviews to provide additional insight in the analysis.

Data analysis

In the analysis of data, the constant comparison technique of was utilized which draws on three essential steps: data reduction, data display, and conclusion drawing and verification. During the data reduction, interview answers of the informants from the audiotape were transcribed and translated, and were decided on how to code, group and organize categories. During the data display, the researcher presented them in a form of a figure illustrating the patterns and findings of data. During the conclusion drawing and verification, initial thoughts about patterns were developed.

The analysis of qualitative data is exploratory in nature and employs a constant comparison procedure (Anfara, Brown, & Mangione, 2002). All interviews were transcribed and analyzed as they were collected. Initially, transcripts were read and re-read, and notes were taken as broad themes or concepts emerged. Subsets of concepts called categories were noted and gradually fell into the context of the broader themes.

Results and discussion

After conducting in-depth interviews with informants that resulted in several pages of transcribed texts, formal analysis of the data began. It started with becoming familiar with the transcribed data from the audiotape. The transcripts were then translated into English language making it sure that the thoughts still preserved the same from the transcript. In addition, the process also entailed making several decisions about which data fit together and were therefore useful for the study, and which data would have to remain unused for this study because they were unrelated to the three research questions. Strict focus to the purpose of this study, the expertise of the panel members, and the authority of the researcher. In the analysis of the data, three steps were employed. There were data reduction, data display, and conclusion drawing and verification. In the data reduction phase, answers of the interviews were transcribed and translated, coded, grouped and organized. In the data display, findings were presented in figure form. During the

conclusion drawing and verification, initial thoughts about patterns were developed.

The data were presented in figures patterned after the study of Gempes (2008). Broad themes are labeled as “root codes”. Similar responses were shortened and grouped into branches. The branch codes were further categorized into roots. The presentation was done by counting the number of responses per branch code and summing up them in their respective main theme or root codes. The sum was expressed in percentage based on the total number of responses, not numbers and definitely not averages.

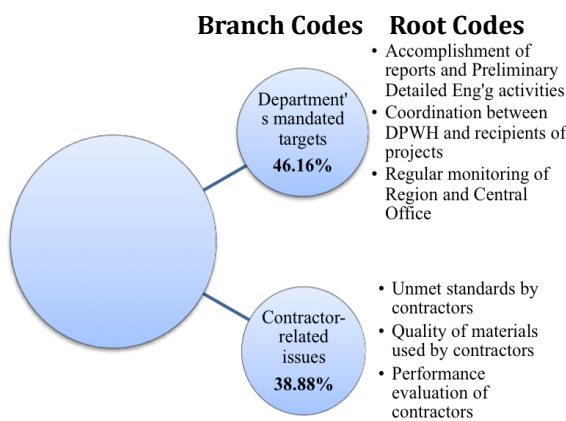


Figure 1: Occupational stress-related experiences
 * Does not sum to 100% due to existence of variant themes.

Figure 1 reveals that among the informants' responses to research question number one, 46.16% was stress-related experiences on the Department's mandated targets, which included accomplishment of reports and the preparation of Preliminary Detailed Engineering activities specially after the list of projects included in the National Expenditure Program (NEP) was released, coordination between DPWH and recipients of projects, and regular monitoring of Region and Central Office. According to Informant VO2136 when asked about what usually caused stress her in doing her function at DPWH, she recalled:

We submit accomplishment report every month. In the site, the contractor won't submit their evaluation report because of unfavorable circumstances. During the project, there were many important things not considered like roads, curing of the roads. Time constraints us. We have so many accomplishment reports to submit (Archive VO2136-11-0236).

In like manner, similar experienced was shared by Informant ML3325, when I asked the same question. She said:

It's not stressful for me, but there are certain cases that it is indeed stressful. As far as Davao del Sur Engineering Office is concerned, it's not

actually a stressful place to work. However, there are times that we are really trying to reach the target even if time is running out. When we try to accomplish these deadlines, especially if projects are expected to be implemented as they are reported, this causes stress to us implementers (Archive ML3325-05-0404).

Moreover, 38.88% of the informants' responses focus on stress experiences centered on contractors, which included unmet standards by contractors, quality of materials used by contractors, and performance evaluation of contractors. This was parallel to the statement of Informant RO3941 when asked about his experience on problems encountered in implementing the project:

In my department, we have these several contractors that are quite lagging in implementing the project, and if we do follow-ups, there are instances that they cannot deliver it right away. It's quite a burden for us in the Department. It might be because they cannot procure the appropriate materials. But we have no choice but to do follow-up even if we start late in the project (Archive RO3941-08-0133).

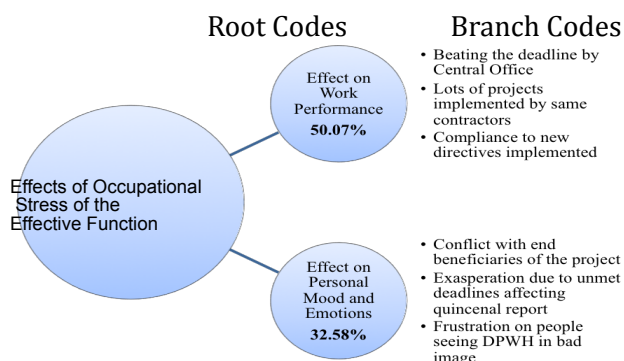
In like manner, similar experienced was shared by Informant DC0813, when I asked the same question. She said:

What makes us stressed as an engineer is when the project is bid, the one contractor that wins (because of the several projects that they have), sometimes, they cannot meet the duration of the project. The project has ended, but the project is not even accomplished. We are stressed because we have targets to accomplish by week or monthly (Archive DC0813-03-0108).

Moreover, the statement of Informant AB4441 revealed the same finding based on the interview when she was asked about her experience on problems encountered with contractors in implementing the project:

What I can about stress as a project engineer is first, when the project is bid and since we are the implementer, there are times that the contractor cannot start because they handled a lot of projects. The contractor does simultaneous work because time is running every now and then. Since they are given limited time to finish the project, we are worried because we have accomplishments to ensure every week, quincenal and monthly in compliance to Quality Assurance and Control. (Archive AB4441-02-0126).

Figure 2. Effects of occupational stress to the effective function of project implementation



* Does not sum to 100% due to existence of variant themes.

Figure 2 shows that among the informants' responses to research question number two, 50.07% was stress-related effects on work performance, manifested in beating the deadlines set by Central Office, lots of projects implemented by same contractors, and compliance to new directives implemented by Central Office. According to Informant AB4441 when asked about the impact of occupational stress in her work, she mentioned:

The contractor that does not meet his/her commitment with the project affects the performance of the project engineer. When the contractor is lagging behind, that means we are not also effective in doing our job (Archive AB4441-02-0700).

In the same vain, Informant WA7740, when asked the same question. He said:

Planning is stressful because of multitasking. For example, as a designer for instance of roads, when you are doing program (in design) with limited time frame for you to accomplish, you become stressful when a new task is inserted for you to work and be rushed to be accomplished. That is quite stressful (Archive WA7740-12-0339).

Moreover, 32.58% of the informants' responses focus on the effect of stress on personal mood and emotions, which was manifested in relief conflict with end beneficiaries in the implementation of projects, exasperation due to unmet deadlines affecting quincenal report, and frustration on people seeing DPWH in bad image. This was parallel to the statement of Informant ML3325 when asked about her experience on how stress caused her performance, she narrated:

The lack of resources in DPWH, like the service (vehicles) that are vintage (worn out) because of lack of budget for that, hinders our implementation. We also lack manpower because of the volume of work. An employee possibly become inefficient because of two or three times the normal of work volume. Plus, the ISO preparations! We need to in a hurry (Archive ML3325-05-1156).

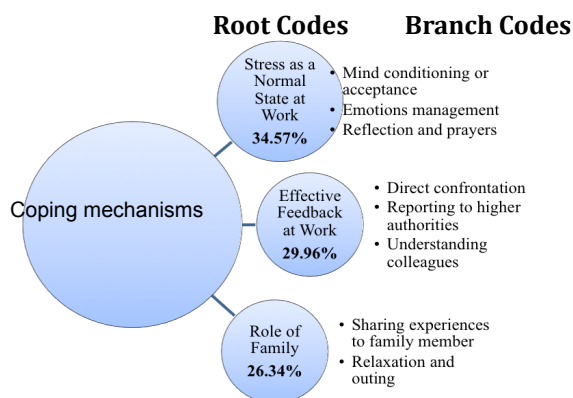
Likewise, similar experienced was shared by Informant DC0813, when I asked the same question. She said:

Sometimes, there are conflicts in the plans that are not addressed, especially right of way; there are structures and plants that are not resolved in the planning phase. Because of this, we might be met with resistance from the people in the community (Archive DC0813-03-0401).

Moreover, the statement of Informant RS1165 revealed the same finding based on the interview when asked about her experience on how she felt when encountering stressful situations in implementing the project, she shared:

Based on my experience, I sometimes handle projects with "honest" contractors, having personnel that are hard-headed. They really cause me stress. Another one is some situation where contractors, engineers or foreman and even laborers who do not follow regulations and tend to do illicit activities (Archive RS1165-07-0110).

Figure 3. Coping Mechanisms



* Does not sum to 100% due to existence of variant themes.

Figure 3 showed that among the informants' responses to research question number three, 34.57% considered stress as a normal state at work, which was manifested in terms of mind conditioning or acceptance, emotions management, and reflection and prayers. According to Informant JJ0264 when asked about how she was coping with stress at work, she narrated:

I do constant follow-up to fast-track the implementation of the projects. If there are problems, we should not fail in informing our contractors and engineers so that they are given due attention. For me, this is a way of decongesting stress build-up because I personally address this by making them informed. (Archive JJ0264-04-1310).

Similarly, Informant AC2005 shared her experiences when asked the same question. She said:

Stress is normal in every work. In my case, I am happy that my team cooperates in solving certain problematic situations. Each of them has a share in the resolution of challenges at the workplace (Archive AC2005-01-0939).

Moreover, 29.96% of the informants' responses focused on effective feedback at work, which was manifested in direct confrontation, reporting to higher authorities, and understanding colleagues. This was parallel to the statement of Informant TR3063 when asked about how she handled stress, she narrated:

In my situation, I talk and exchange ideas with personnel regarding the challenges and problems that we encounter in the workplace. I also raise concerns to direct supervisor because of bureaucracy in the office. You cannot just enter in the office of your boss (Archive TR3063-10-1218).

In like manner, similar experienced was shared by Informant ML3325, when asked the same question. She said:

Communication. When there are problems, it's better to talk with it. You also need unwinding, relaxing and team-building. Summing it all, communication is the key. You might not work harmoniously if you do not communicate effectively and understand your differences (Archive ML3325-05-2401).

Lastly, 26.34% of the informants' responses focused on the role of family in distressing from stress brought by work, which was manifested in terms of sharing experiences to family member and relaxation and outing. This was parallel to the statement of Informant RS1165 when asked about how she handled stress, she narrated the role of his family:

When I arrive home, I share this to my spouse so that I can unload my feelings. I share this because I do not really argue with my colleagues. My spouse listening to my concerns in the office is quite a stress-reliever. (Archive RS1165-07-1353).

Similarly, Informant VO1876 shared her experience I asked the same question. She said:

Stress at work is permanently happening at work. Just make sure that the stress at work should not affect your relationship with your family. Anyway, they are the reason why you are working right? (Archive VO1876-11-1027).

Conclusion

Based on the results of this study, the researchers opted to point out several remarks. These are the following: occupational stress can occur when there is a mismatch between the requirements of the role, capabilities and resources and supports available. Everyone knows what stress feels like but while this stress is normal, if it is ongoing, it can become a

problem. While the places we work come in all shapes and sizes, mentally healthy working environments can help in addressing occupational stress experienced by project implementers. Moreover, positive workplace culture is contributory in attaining a good place to work. People feel good about coming to work, and everyone is encouraged and supported in the function of their work. Another realization of the researcher is that stress can be managed. Stress, heavy workloads, unrealistic deadlines, poor communication, uncertainty – these and other factors can all contribute to anxiety at work, and it is up to project managers to keep them in check. Moreover, the power of support by stakeholders to the vital contribution of DPWH to the community will bring about ease for the project implementers to do their job. Finally, as regards to this study, the researcher could say that occupational stress experienced by project implementers and supervisors in the case of Davao del Sur District Engineering Office is a case worthy of reflection. The problems encountered by project implementers may or may not reflect the experiences by other District Engineering Office in the Region or in the country at large. With the implications presented, occupational stress as experienced by project implementers and supervisors may be lessened, if not eradicated.

Implications

Stress has been shown to be present in all professions (Olson & Swenson, 2011), and is ubiquitous throughout the phases of the performance of work or task (Glass, Kasl, & Berkman, 1997). Occupational stresses often lead project managers and implementers to rely on overtime as a tactic to meet project mileposts and deadlines. With this, the aim of this study was to identify the occupational stress experiences and the coping mechanisms of project implementers and supervisors in the case of Davao del Sur District Engineering Office. The researcher had done in-depth interviews and data analysis on the responses from 12 informants. The insights gained from the informants in this study and the review of the literature plays a major role in the work performance and effective functioning of project implementers and supervisors dealing with occupational stress and their coping mechanisms.

Working excessive or mandatory overtime is not only disruptive for the project implementer but also for the implementer's family and social life (Hill, Hawkins, Ferris, & Weitzman, 2001). When the transitions between work and home become disrupted, people tend to overlap work and home functions that lead to more stressful and less efficient multitasking (Floro & Miles, 2003). Such schedules can adversely affect a project implementer's time with his/her family, create role conflicts, work overload, and miscommunication (Crouter, Bumpus, Maguire, & McHale, 1999). To address this, improved scheduling and communication with contractors with regards to

project implementation and expectations can be established through the proper implementation of project management (Shigaki, Glass, & Schopp, 2006). Effective management of the project expectations and deliverables helps an organization like DPWH to avoid having projects passed to contractors who are fond of overlapping many projects at one time such that a bind on one will affect performance on the others. Nonetheless, it is a given that the best plans will often show flaws in later development (Arora, Aggarwal, Moran, Sirimanna, Crochet, Darzi, & Sevdalis, 2011).

Occupational stress can also be reduced by realizing that people in the workplace are also stressed, and that poor communication happens in between. Shigaki et al. (2006) suggested that much project completion occurs at the wrong time and is often done by the wrong people. He further considered that project implementers and supervisors do not communicate with the people around as clearly as they want to. It also highlights the need to involve project implementers who have stronger interpersonal needs and skills, so they can communicate what they need and provide more effective support to each other.

The above-mentioned implications may be of great help for project implementers and supervisors in the context of DPWH Davao del Sur District Engineering Office. The above-stated measures may somehow eradicate the imbalance between project completion as expected by project implementers of DPWH and the occupational stress of such expectations bringing them.

Competing interests

The was no competing interest exist in the conduct of this study.

Ethical approval

To address the research ethics, the researchers followed the strict protocols for confidentiality of the participants' identity and the information gathered. Consent letters were given to the participants to seek for their permissions before the conduct of the interviews. The aim and objectives, length of the interviews, and withdrawal clause were also presented. Interviews were conducted in a most conducive place to provide ample privacy, little distractions, and comfortable environment to the participants. The participants were assured that the recorded interviews were kept by the researchers for safe-keeping and would be destroyed after two years. The information obtained were used for research purposes only.

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Tri-people Hybrid Conflict Resolution Approach: Enabling A Culture of Peace in Alamada, North Cotabato, Philippines

- Asst. Prof. Mark Anthony N. Lataza, MA
 Pamantasan ng Lungsod ng Pasig (University of Pasig City); University of Santo Tomas, the Philippines
marklataza@gmail.com

- Hon. Bartolome B. Lataza, Jr.
 Municipal Councilor, Alamada, Cotabato, the Philippines
bart.jr02@gmail.com

Abstract

This paper is focused on the Tri-people hybrid conflict resolution approach adopted in Alamada, North Cotabato as a model for enabling a culture of peace in Mindanao, Philippines. Alamada is a municipality of North Cotabato, Mindanao. The population is comprised of Iranon (Muslims), Christians, and other indigenous/ethnic groups (Lumad). The greatest challenge encountered was peace instability resulting from territorial and ancestral land disputes; identity and cultural discrimination; environmental threats, criminality, and poverty.

Peace instability is an armed conflict that causes the animosity brought about by the history of fighting in Mindanao. Land dispute is a conflict in Alamada but it could spill over to rido and armed conflict. Rido/clan conflict is a Muslim term for feuds, referred to as a sporadic outburst of retaliatory violence between families and kinship groups as well as between communities and environmental issues.

To address the societal conflict and strengthen the alliances of "Tri-people", peace-building practices are essential. This is to effectively settle longtime issues and constitute best practices among the community from a conflict-torn to a zone of

peace municipality. By combining the informal customary procedures of the Muslim people and the Indigenous community, settling gaps within the community is more effective.

As result, there were at least 18 clan conflicts that were settled under the approach, including one clan conflict in the municipality which has been preserved for 50 years. The effective implementation of the reconciliation mechanism is limited in the declaration of the Zone of Peace in Alamada. The government and its local partner gathered more than 10,000 signatures from various consultations and discussions in the municipality to gather support for the declaration. Peacebuilding should be a mechanism converged with public service to craft a sensitive and hybrid initiative to address societal problems. There is a need to intensify and concretize an effective tool to promote a culture of peace as an ethical solution to a culture of violence.

Keywords: Alamada, Alternative Dispute Resolution (ADR), Culture of Peace, Culture of Violence, Love and Tri-people.

*Since wars begin in the minds of men,
 it is in the minds of men than defences of peace
 must be constructed.*

- UNESCO Charter, 1945

Introduction

Kalilintad, Kalinaw, Kapayapan, Peace – these are different words but it is a vision that everyone aspires for (EED, 2012, Prologue). Peace is a vision to which we all aspire. This is also an ancient desire of the distant past. Even modern peacebuilders and theorists take different positions in analyzing our social processes which could cultivate peace. Peace has been thought about, talked about, and studied in many ways and in many aspects. Peace is a dream of every person. This is also the dream of Alamadians to live peacefully and productively. The actualization of this culture of peace will redefine each person toward progressive life.

This peace is a God-given peace that our creator desires for us, and to which life simply calls us, is built on justice, where everything and everyone in the created order is in the right relationship with each other and can reach their God-given potential. Each person must be envisioned as or God-Centered person empowered, prosperous, and living in love, justice, and peace. This argument of Vatican II can also be seen in Albert Einstein's "Peace is not merely the absence of war but it is the presence of justice, of law, of order—in short, of government" (1968, p. 371). This is also substantiated by the fact that Vatican II implicitly expresses it by stating that "Peace is not merely the absence of war; nor can it be reduced solely to the maintenance of a balance of power between enemies; nor is it brought about by dictatorship. Instead, it is rightly and appropriately called an enterprise of justice" (Gaudium Et Spes, 1965). Justice is conceived in both abstract and

concrete forms. In its abstract form, justice is thought of as peace, equality, and unity of people. Likewise, Betita supported this and said "There can be no justice if there is no peace" (Betita, V., et al., 2014, p. 34). While Fromm also highlighted and said, "The condition of peace is not only the absence of violence rather peace is the full humanization of individuals through full relationships with other human beings and relationships with nature" (2011, p. 4). This simply means that the government should be the one promoting justice by implementing the law and protecting the society from fragile exhaustion that exists in the aftermath of conflict when lives have been torn apart, relationships broken, infrastructures destroyed, and homes demolished.

Therefore, the culture of peace is not merely the absence of war but it is a peace that is geared toward the person's quality of moral decisions, and to be holistic it has to be grounded on the core value of the person. Real peace needs to be worked at, as a life-long relationship. It is built by those who direct their efforts to its establishment, day after day. Its pursuit means listening to the voice of the oppressed and being challenged to action. It means seeing all humanity as our brothers and sisters and honoring other people's development, as well as our own. It means building a future for the next generations so they can know life in all its fullness and peace in its entirety.

Culture of Peace

It was in 1989, during the International Congress on Peace in the Minds of Men, in Yamoussoukro, Côte d'Ivoire, that the notion of a "Culture of Peace" was first mentioned. Over the past ten years, the idea has come a long way. In 1994, Federico Mayor, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), launched an international appeal on the establishment of a right to peace; in February 1994, UNESCO launched its Towards a Culture of Peace program; in 1997, the United Nations General Assembly proclaimed the year 2000 as the "International Year for the Culture of Peace"; and in 1998, the same Assembly declared the period 2001-2010 the "International Decade for a Culture of Peace and Non-Violence for the Children of the World" (Adams, D., 2005).

The expression "Culture of Peace" took shape in 1989, such a culture already existed before the word was created. UNESCO's creation is a testimonial to the existence of such a culture as early as 1945. The culture of peace was first analyzed by United Nations as a "set of values, attitudes, modes of behavior and ways of life that reject violence and prevent conflicts by tackling their root causes to solve problems through dialogue and negotiation among individuals groups and nations." The notion of a "Culture of Peace" was first mentioned during the International Congress on Peace in the Minds of Men, putting this mandate into practice (1989). It stated: "Peace is reverence for life. Peace is the most precious

possession of humanity. Peace is more than the end of armed conflict. Peace is a mode of behavior. Peace is a deep-rooted commitment to the principles of liberty, justice, equality, and solidarity among all human beings. Peace is also a harmonious partnership of humankind with the environment (Mayor, 2011, p. 10).

This was supported by Boulding, the main point about the Culture of Peace is that it deals creatively with difference and conflict, and it is a listening culture. The culture of peace needs lots of space for problem-solving. So, what we need to do is create a lot of space for problem-solving. I believed that the culture of peace is building a society centered on human creativity and productivity. This is how the notion of a culture of peace conquered the world. Fromm asserts that it is one of our human ideals without which we become insane (1956, p. 28).

Same as in the Philippines especially in Mindanao, the culture of peace was adopted with the same framework of sustainable peace consisting of values, attitudes, and behaviors. It reflects and inspires social interaction and sharing based on the principles of freedom, justice, democracy, human rights, tolerance, and solidarity. It further rejects violence, endeavors to prevent conflict by tackling the root causes of the problems through dialogue and negotiation, and guarantees the full exercise of all rights and the means to participate fully in the development processes of the society (EED, 2012, p. 43). However, the culture of violence is also present that hampered the culture of peace.

Culture of Violence

Since we need to understand the culture of peace, we need also to differentiate it from the culture of violence. These are visible and invisible conflicts. Visible conflicts are physical assault, killing, stealing harassment, war, terrorism, etc., while invisible conflict is hatred, misunderstanding unbalanced, judgment, human rights, violation, polarization, etc. This visible and invisible conflict is present everywhere even in each person, in the family, community, and society (Act for Peace Programme, 2006, pp 1-2).

There are four dimensions or levels of conflict that we need to consider and these are Personal Dimension (Intra-personal conflict), Inter-Personal Dimension (conflict with other people), Structural Dimension (Intra-group conflict/Intra-organizational), and Cultural-Religious Dimension (conflict with other people). Personal Dimension (Intra-personal conflict) refers to conflicts occurring within a person. Usually, people need to work on their inner struggles and issues to be constructive in social conflicts. Ex. Selfishness, greed, trauma, lack of self-confidence, and sinfulness. Inter-Personal Dimension (conflict with other people) refers to conflicts occurring between individuals or a small group of people. One should overcome any conflicts between themselves before negotiating broader

social change. Ex. biases, prejudices, stereotyping, trash talk. Structural Dimension (Intra-group conflict/Intra-organizational) Refers to those conflicts that happen within a particular group, whether it is a religious, ethnic, political, or other type of an identity group. It is important to be able to manage the conflicts within your group and be able to communicate with others within your group to build support for the long-term process. Ex. poverty, injustice, oppression, inequality, corruption. Cultural-Religious Dimension (conflict with other people) refers to conflicts occurring between large organized social or identity groups. To be successful peacebuilders we need to have the skills to work both within our groups as well as between groups (Ibid, p. 15).

Even Fromm claims that the concept of violence is rooted in hate and destructiveness" (2004, pp. 43-48). Fromm added that "hate and destructiveness are impulses which obscure rational and objective thinking and easily create polarization in that they reinforce each other on both sides of the political spectrum. The main problem with the idea that aggressiveness is an instinct charged with a spontaneously increasing energy lies in the extraordinary variability of aggressiveness among individuals and societies" (Ibid). This validates further Hobbes's reaction to the ambivalence of modernity which asserts that injustice, ingratitude, arrogance, pride, iniquity, and the rest can never be made lawful it can never be that war shall preserve life, and peace destroys it (1951, p. 121). Slavoj Zizek sustained this violence. According to Zizek, "there is subjective and objective violence which cannot be perceived from the same standpoint: subjective violence is experienced as such against the background of a non-violent zero level. It is seen as a perturbation of the "normal," peaceful state of things. However, objective violence is precisely the violence inherent to this "normal" state of things. Objective violence is invisible since it sustains the very zero-level standard against perceiving something as subjectively violent. Thus, systemic violence is something like the notorious "dark matter" of physics, the counterpart to all-too-visible subjective violence. It may be invisible, but it has to be considered if one makes sense of what otherwise seems to be "irrational" explosions of subjective violence" (2008, p. 2).

Mindanao is known for peace instability such as armed conflict (because of the animosity brought about by the history of fighting in Mindanao); territorial and ancestral land disputes; identity and cultural discrimination; environmental threats, criminalities, and poverty. Land conflict, rido/clan conflict, armed conflict, and environmental issues were the several conflicts it had been successfully reconciled. Land conflict is the major conflict in Alamada but it could be spilled over to rido and armed conflict. Rido is a Muslim term for feuds, which refer to a sporadic outburst of retaliatory violence between families and kinship groups as

well as between communities. This violence is characterized by a sporadic outburst of retaliatory violence between families and kinship groups. This phenomenon frequently occurs in areas where the government or central authority is weak, and areas where there is a perceived lack of justice and security (Magno, 2007, p. 11). Brothers versus brothers fight each other because of land disputes, family members fight for political positions, and the individual kills a member of his/her family because of KaPe (Kapangyarihan/Power and Pera/Money). The problem of violence, according to Torres, emphasized that this phenomenon frequently occurs in areas where the government or central authority is weak and areas where there is a perceived lack of justice and security (Ibid).

Therefore, the root of this culture of violence may be traced to self-serving value on the part of each person like in business (protectionism cartel/monopoly behavior, tax evasion, etc.), in government (graft and corruption, etc.), other sectors (dishonesty, lack of concern for the common good, etc.) or personal interest (pride, anger, gluttony, lust, avarice or covetousness, envy, and sloth). The majority thinks that the problem is outside of them such as Money, Consumerism, and More money (MCM) or KaPe, etc., so each person focuses his energies on treating the problem. But we forget spiritual values such as dialogue, love, and reason. Fromm explains "... man, in any culture, is faced by a gamut of possibilities: He is the archaic man, the beast of prey, the cannibal, the idolater; but he is also the being with the capacity for reason, for love, for justice" (1994, p. 3).

Alamada Peace Journey

Alamada is a municipality of North Cotabato, Mindanao, Philippines. Alamada is composed of 17 barangays; four of which are already classified as urban areas. These are Baragays Mirasol, Bao, Dado and Kitakubong. As of 2009, it has a population of 55,865 people in 14,966 households. The population is comprised of Christians, of which over 70% are Roman Catholic; 12% belong to other Christian denominations, while the remaining percentage follows Islam and other indigenous Tribal religions (Lumad). This is called the Tri-people of Alamada. More than half of the population speaks Ilonggo or Hiligaynon. Many Alamadians are also fluent in Cebuano, Iranon, Ilocano, and Karay-a while Maguindanaon, Manobo, and Maranao are used as native dialects by minority groups in the area (EED, 2012, p. 18).

During the mayoral leadership of Hon. Bartolome "JUN" Lataza, Jr., advocates and political will to promote peace on a micro level because Alamada was in constant conflict, war, and misunderstanding of Tri-people. According to him "Conflict settlement was not all about us, nor for few people but generally for the whole community," Jun wanted to change the political paradigm of politics in Alamada but it is very challenging because everyone dreams of this

culture of peace but only in words not in action. During the term of Jun in public office, the priority thrust is peacebuilding, moral recovery, and livelihood. For Jun, the Culture of Peace can be instituted for every person. The gains of each person must be placed in its fitting context: the sustainable improvement of the quality of life for his family, community, and society. In other words, the culture of peace needs to be primarily geared towards responding to the peaceful self, peaceful family, peaceful community, and peaceful society so that it will not compromise the ability of future generations to meet their needs and security. Any move to alleviate the culture of violence must find an anchor in each person's efforts to promote the culture of peace.

However, war has been a menace in Alamada. It was 2008 were three Barangays of Alamada experienced conflict that ended in bloodshed. Thirteen houses were burned, four people died, and seven people were badly wounded. Such violent incident keeps on recurring leaving thousands of innocent people especially children to evacuate and be displaced from their farms and education (EED, 2012, p. 27). This echoes Fromm's notion of necrophilic character, love of death, incestuous symbiosis, and malignant narcissism, a regressive character orientation, a malignant form of destructiveness, that touches the core problem of evil in the modern world (2010, p. 16). That's why Jun applies the Tri-people Hybrid Conflict Resolution Approach to address this concern in Alamada.

Tri-people Hybrid Conflict Resolution Approach

To address the societal conflict, Alamada launched several peace-building practices that would aim to effectively settle longtime issues and constitute best practices among the community. Through a conflict mitigation approach, together with the personnel of Alamada Municipal Police Station, the counterpart from the Philippine Army, Barangay Officials, and Christians-Muslim community leaders and Elders went to the place to evaluate the actual situation to decrease the tension and put an end to the aggressiveness and violent reactions of both parties to avoid further escalation of the armed conflict (EED, 2012, p. 28). The cases of rido in Alamada weren't resolved using conventional legal means. The Local Government Unit (LGU) of Alamada employs the Alternative Dispute Resolution System in settling conflicts in the communities. Along this line, among the steps taken was the creation of the Tri-people Consultative Service Desk under Executive Order No. 16, series of 2010. The council of elders of this group is composed of 25 different members from the Christian, Bangsamoro, and Lumad communities. Through this process, conflict is mitigated and resolved through methods that the communities have been practicing for generations (Balay Mindanaw Foundation, Inc., 2013, p. 24).

This method was also experiential in the observance of the Republic Act (RA) 9285 otherwise

known as the "Alternative Dispute Resolution of 2004" (Lawphil.net, 2004). Specific interventions like the creation of the Tri-people Consultative Service Desk and recognition of the Tri-people local governance and processes were primarily given importance by the Local Chief Executive (mayor) in supporting the peace-building mechanism in Alamada. It is hybrid because the LGU of Alamada applied that mechanism by combining the informal customary procedures of Moro people and Indigenous People in settling gaps in their community. This was part of their ways to being more engaged with communities in Alamada. According to Jun Lataza, "There are standard or given programs in the government. To strengthen these, we incorporated peace-building advocacy and a peace lens in every program. We wanted to instill a culture of peace in the hearts and minds of the people. It's hard to move forward if peace is not achieved" (EED, 2012, p. 26). From a conflict-torn to a zone of peace municipality, Jun proudly shares the milestones and struggles behind the total success of achieving peace engagements in Alamada. Together with MPOC, they observed that rido is the grassroots conflict that must be deeply concerned and settled first in Alamada. Working together with MPOC and using Alternative Dispute Resolution (ADR) the Town's Relationship (Ugnayan nang Bayan) at Simbahan-Mosque were the best practices to reconcile rido in Alamada. MPO C's purpose is to normalize and perform necessary actions on regulating the practice of human rights in the community. ADR is a reconciliation method encouraged by the Philippine Supreme Court (Ibid).

The Tri-people Hybrid Conflict Resolution Approach in enabling the culture of peace in Alamada is very successful so far. As result, there were at least 18 clan conflicts were settled. One of these, including were the oldest clan conflicts in the municipality that had been preserved for 50 years. That effective implementation of the reconciliation mechanism compelled the declaration of the Zone of Peace in Alamada. Every year, Alamada celebrates the Week of Peace as its commitment to promoting the region. Thousands of people from all walks of life join the local government's call for peace and unity among Christian settlers, Bangsamoro, and Lumads. Series of Culture of Peace Training and Seminars are held now and then. This is participated by local leaders, Non-Government Offices (NGOs), religious and tribal leaders, and some academe. The government and its local partner gathered more than 10,000 signatures from various consultations and discussions in the municipality in getting the pulse of the people in the said declaration (Ibid., p. 37).

Thus, Lataza as a Christian stresses that "We could not have done this without Muslim peacebuilders" (BMFI, 2013, p. 24). Jun continues "If they had not helped us negotiate, we wouldn't have gone anywhere." Jun forged alliances with many Muslim elders, the most notable of whom was

Ustadz Ali C. Shariff (Bangsamoro). Shariff said "Being a peace advocate, I learned to forget my old self as a guerilla leader. When my brothers were killed due to a land dispute, I brushed away the idea of retaliation. Instead, I entrusted to Allah and our government the people who were responsible for my brother's death. I believed that peace and development could only be achieved if we understand and love each other as brothers and sisters." Likewise, Timuay Danny Mansalinta, Jr. a Manobo (Lumad) agreed and he said "We were happy that finally, we were recognized by the government. The importance is given to us - Lumads impelled us to support the local government's main thrust which is to create peace in our community." Also, Sultan Bagui Butig said "Muslim, Christians, and Lumads should Unite. Mrs. Helen Guling a Social Welfare Assistance of DSWD said "the peace initiatives spearheaded by the local government unit of Alamada have brought a positive result. People no longer live under the shadows of fear and restlessness. Perhaps it's because the LGU of Alamada has encouraged everyone-the Christian settlers, the Bangsamoro, and the Lumads to get involved and participate in building a peaceful and progressive community." This was supported by The Tri-People Consultative Service has resolved several family feuds in the area and has helped in spearheading peace dialogues and negotiations not only in Alamada but in nearby municipalities as well. A series of programs anchored on peace were also created to help alleviate poverty and avoid armed conflict. Some of these are the Munisipyo sa Barangay (Municipal in Barangay) program. Moral Recovery Program, Disaster Preparedness Program, Eco-tourism, and School of Peace Program (Ibid., pp. 32, 33 & 37).

Dialogue, Love, and Peace

In strengthening the function of the Municipal Peace and Order Council (MPOC) of Alamada, where the mayor is the chairperson, they conducted consultations and interfaith/interreligious dialogues (Dialogue of words, dialogue of Life, dialogue of religious experiences, dialogue of actions, and Dialogue of Values and Cultural interest) adhering to the power of inclusion. This effort got the big respect of religious and traditional institutions. A council of elders was created comprised of the traditional elders of all beliefs to make the reconciliation process more inclusive and systemic (Act for Peace Programme, p. 38-39). Even, the United Nations Development Programs (UNDP) debates that a Culture of Peace can be attained through genuine dialogue.

The different dialogues the dialogue of words is a dialogue using words that give life or positivity such as star power words like sorry, I love you, you are important, etc. rather than uttering words that down the dignity of one person such as Muslim are terrorist, Christians are land grabbers, etc. these words are unauthentic dialogue and lead to

misunderstanding/conflict. Dialogue of life is a dialogue to protect life such as dialogue between conflict persons or groups that will cause war, killing another person, or clan wars like rido, etc. The dialogue of religious experiences is the dialogue between different groups such as Christian, Muslim, Lumads, or Indigenous Groups (IGs) so that the issues and concerns of each group will be addressed and will not lead to conflicts or violence. Dialogue of action is walking the talk. It is important to put into action the words that are agreed upon by each person or group. An example of this is those who help the poor, the disadvantaged, or those who are affected by war and conflicts. This action is very important so that words will not only well say but it's well done. Lastly, the dialogue of values and cultural interest in respect to the different cultural differences by valuing each person with different interests but one humanity. Macer supported this and said "There is no civilization on earth that has not been enriched by contact, interaction, and exchange with others. Within civilizations, too, interactions and exchanges bring similar rewards. Civilizations are thus in constant dialogue not only with each other but also with themselves" (2010, p. 115).

This dialogue is a result of the love that unites the tri-people in Alamada. Fromm highlighted that "Love is union with somebody, or something, outside oneself, under the condition of retaining the separateness and integrity of one's self. It is an experience of sharing, of communion, which permits the full unfolding of one's inner activity" (1955, p. 31). While, Macer supported this and he said "Love in different expressions is a common element in our biological, social, and spiritual heritage, that constructs our religious and cultural identity" (2010, 114). Thus, this love will result in a peaceful community. Thus, Casto and company highlighted that,

"In today's world, a culture of peace should be seen as the essence of a new humanity, a new global civilization based on inner oneness and outer diversity. The flourishing of a culture of peace will generate the mindset in us that is a prerequisite for the transition from force to reason, from conflict and violence to dialogue and peace. A culture of peace will provide the bedrock of support to a stable, progressing, and prospering world for all" (2010, xi).

Thus, the idea of the culture of peace echoes Fromm's notion of biophilic character which is the love of life, independence, and the overcoming of narcissism (2010, p. 2). The seeds of peace as reflected in the capacity-building and strategic peace-building activities have been sown and planted in the hearts and minds of the Christian settlers, Bangsamoro, and the Indigenous Peoples (IPs) over the years. The accumulated positive experiences of living and working together have brought about a favorable climate conducive to developing their potential and achieving their goals and aspirations in life. This once-obscure town in

North Cotabato is now ready to showcase its best treasures to the public. It is hoped that these will serve as a vehicle to promote peace and unity among the Alamadians and attract more visitors (EED, 2012, p. P. 45).

Conclusion

The journey of Tri People toward the Culture of Peace became fruitful. Back in November 2010, Alamada celebrated its first Mindanao Week of Peace. More than 8,000 attended the event. Christians, Lumads, Muslims, soldiers, and rebels alike signed the wall of peace, a covenant on their common goal, in the Alamada town gymnasium. Everyone was present – the priest, nuns, soldiers, students, and all sectors of society, even members of the Moro National Liberation Front," says Lataza (BMFI, 2013, p. 25). Alamada also is blessed with its abundant natural resources and they have been championing the protection of the environment and ecotourism like Asik-Asik falls. Asik-Asik was before a surveillance area of revolutionary fully armed groups which made the falls untouched by the locales and unreached by the government support. The LGU succeeded in conducting a total inclusive dialogue with the rebel force leaders and come up with the peace agreement. As result, Asik-Asik falls made the majestic falls open to the public.

Then, they also accomplished to execute an Integrating of Peace Education into Basic and Teacher Education at all academic institutions in the municipality, including Madrasa schools. According to Ms. Jessette F. Morales – School Principal "Peace is what we are dreaming of where the children, parents, teachers and school heads will have to leave harmony with each other" (Ibid).

Therefore, the journey of Alamada in peacebuilding is very successful until now. The new leaders incorporated the culture of peace in every program of the municipality and they are now in the process of restorative justice. According to the present Mayor Hon. Jesus Sacdalan "There is no sustainable peace without sustainable development". Therefore, a Culture of Peace is not only a concept, but it is a Choice. The promotion of a Culture of peace through dialogue which is essentially rooted in love becomes the ethical solution and key to the Tri-people hybrid Resolution in Alamada, North Cotabato.

Acknowledgment

This research is not possible without the supported of Hon. Bartolome "JUN" Lataza, Jr, a Mindanao Peace Institute alumni who learned the Conflict Management course and Restorative Justice course in 2011 and 2012, during the peacebuilding training, a currently Municipal Councilor (2019-present), Former Municipal Mayor for 3 years (2010-2013), former Vice Mayor for 9 years (2001-2010), and a Councilor for 3 years (1998-2001). With 17 years of experience in the Armed Forces of the Philippines and 5 years in the

Philippine National Police, he acquired complete knowledge on how to merge the defense strategy, conflict management, social engagement, and peace approaches. Also, through the support of Hon. Jesus Sacdalan – Municipal Mayor (2019-Present) and former Congressman, Hon. Leonigildo "Toto" Calibara - Municipal Vice Mayor, Local Government Unit of Alamada, North Cotabato, Mrs. Helen Guling a Social Welfare Assistance of DSWD, Ustadz Ali C. Shariff the chairperson of Tri-people Consultative Desk, Sultan Bagiul Butig (Muslim), Timuay Danny Mansalinta, Jr. a Manobo (Lumad), and Ms. Jessette F. Morales – School Principal (Christian).

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Discharge support practices of nurses in NICUs in Niigata Prefecture, Japan

- Mio Tanaka^a,
- Subasinghe Pathirannahalage Kalpana Jeewanthi Subasinghe^b,
- Tomoko Sumiyoshi^{a,b},
- Nao Seki^a,
- Utako Shimizu^a,
- Hiroshi Kobayashi^c,
- Akurugoda Mahanakathige Shyama Deepanie Pathirana^b

^a Faculty of Health Sciences, Niigata University, Niigata, Japan

^b Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya, Augusta Hill, Sri Amarawansa Mawatha Peradeniya, Sri Lanka

^c Niigata College of Nursing, Japan

E-mail: Mio Tanaka mio@cgl.niigata-u.ac.jp

Abstract

In Japan, the role of discharge support nurses in neonatal intensive care units (NICUs) is becoming more important as the survival rate of newborns increases. The purpose of this study was to clarify the discharge support practices of nurses in the NICU in Niigata Prefecture. A descriptive, cross-sectional study was conducted among discharge planning nurses (DPNs) working in NICUs in Niigata Prefecture. The survey items included basic attributes, planning skills of DPNs (measured using the Japanese version of the Nurses' Discharge Planning Ability Scale [J-NDPAS]), learning opportunities, environment for consultation, and difficulties. Sixteen DPNs (response rate: 85.7%) were included in the analysis. The average age of the respondents was 42 years. Eighty percent of them

experienced difficulties with discharge support, and 50% of them had no opportunity to learn. The learning opportunities and satisfaction pertaining to discharge support significantly differed among high and low J-NDPAS scores. It is important to evaluate discharge support in the NICU and educational support to create a continuous learning environment.

Introduction

Discharge planning is a process that helps maintain the continuity of patient care from in-hospital care to the care provided in the community. The concept of discharge planning was developed and promoted in the 1960s in the United States to provide a better understanding to the family, patient, and community about the post-discharge period, thereby reducing post-discharge complications and improving the quality of life of the patient and their family (Shepperd, et al., 2013). Furthermore, studies have found that effective discharge planning reduces the length of hospital stay and the likelihood of readmission. With the expansion of the process of discharge planning worldwide, systems that connect the hospital and social services in the community have also been developed (Lin, et al., 2021; Gonçalves-Bradley, et al., 2016; Nelson, et al., 2000).

As nurses play a vital role in patient care, discharge planning became an integral part of the nursing care process during the 1990s (Lin, et al., 2021). Discharge planning interventions conducted by nurses have been shown to be effective in reducing readmissions and post-discharge complications (Ekim, et al., 2016; Zhu, et al., 2015; Fox, 2016). Japanese nurses tend to be more involved in discharge planning than nurses in other Asian countries, such as South Korea and Thailand (Tsujiura, et al., 2016). At present, although nurses are aware of the importance of discharge planning and know that discharge planning should begin on admission, many factors such as busy wards, communication barriers, lack of staff, lack of policies and guidelines, and inadequate support from social services may prevent them from implementing discharge planning in practice (Wong, et al. 2011; Tomura, et al. 2017). Most nurses prioritize patient care and only conduct discharge planning after the doctor has decided to discharge the patient (Graham, et al., 2013; Domoto, et al., 2014).

Although less studied, discharge readiness and risk assessment of the post-discharge period in neonatal intensive care units (NICUs) are vital for providing a better transition from hospital to home care. Establishing parenting after NICU discharge is a complex process compared to other acute care settings (Dellenmark-Blom, et al., 2014). Lack of proper discharge planning for NICU patients can lead to severe emotional problems in the family during the post-discharge period. Discharge readiness of the family should be assessed in advance to ensure parental satisfaction and patient safety (Purdy, et al., 2015; Arad, et al., 2007). Family-

oriented discharge planning programs have been shown to reduce healthcare utilization and health costs during the post-discharge period (Ingram, et al., 2016). Nurses have to maintain a close relationship with patients' families during their stay and after discharge, and have a good understanding of the family environment to provide balanced discharge planning (Smith, et al., 2009). Nurses are at the forefront of helping family members develop the necessary skills to take care of their children at home. Therefore, nurses play many roles in the discharge process, including those of educators and collaborators (Góes, et al., 2017). In recent years in Japan, there has been a significant increase in the survival rate of newborns with complex medical care needs (Hahn, et al., 2011; Nakanishi, et al., 2018). In Japan, new interventions for newborn screening have been implemented, and the roles of NICU nurses have changed (Kyojuka, et al., 2016). Surveys have revealed the need for policies and programs to increase the skills of discharge planning nurses (DPNs) in Japan (Tomura, et al., 2017).

In recent years, the survival rate of newborns with complex medical needs has increased (Hahn, et al., 2011). There is a need for studies to identify gaps in the current practices of NICU discharge planning and effective interventions to fill the gaps identified. Such studies would enable improvements in the discharge process. The repeated use of health services in the post-discharge period of newborns discharged from NICUs can be prevented using an effective nurse-led discharge process. In Japan, national guidelines for the improvement of the perinatal care system were established in 2010, and Niigata Prefecture has been working to resolve issues by assigning NICU hospitalization support coordinators. Five years have passed since the establishment of the system, and as part of the evaluation of the current support for discharge from the NICU; we conducted a survey of the actual situation.

The purpose of this study is to clarify the status of discharge support for among DPNs working in NICUs in Niigata Prefecture.

Term Definition

While looking forward to their post-discharge lives together with the patients and their families, and accompanying their thoughts in a series of processes so that their medical treatment lives become possible" (Volland, 1988). Discharge support also includes "discharge coordination," which comprises activities to provide specialized support for the reconstruction of the lives of children hospitalized in the NICU and their families so that they can lead stable lives in terms of physical, mental, and social aspects after discharge from the hospital, through coordination and cooperation with professionals inside and outside the hospital" (Tanaka, 2015).

DPNs are defined as "full-time or dual-purpose nursing staff engaged mainly in discharge support work in discharge planning departments and who are responsible for helping the discharge of patients

admitted to the ward" (Tomura, et al., 2017). In this study, nurses who provided hospital discharge support were also included in the DPNs. The reason for this is that the number of nurses who belong to the discharge planning department and provide discharge support in the NICU is extremely small in Niigata Prefecture. As most of the actual discharge support is provided by the nurse as a discharge coordinator in the NICU, we conducted the survey as DPNs.

Methodology

Study Design

A descriptive cross-sectional study.

Study Sample

All DPNs working in NICUs in Niigata Prefecture with more than three years of experience in the NICU and working as full-time or part-time nurses were included in the study sample.

Data collection methods

The nursing officer in charge of each unit was contacted by phone, and details were obtained about the number of DPNs in a particular unit. The NICUs in Niigata Prefecture (as of the September 2016 survey) include three perinatal medical centers (PMC) and four Regional perinatal centers (RPC). Two RPC facilities were excluded from this survey because they did not accept external patients (Niigata Prefecture Perinatal Medical Network Demand Information). The actual number of RPCs was set at two, bringing the total number of facilities surveyed to five. There were approximately 150 nurses in total in the five NICUs, and among them, according to the interviews with the heads of NICU divisions, three to eight nurses in each facility had the role of DPN, or discharge support nurse. We distributed ten copies of the survey to each PMC and five copies to each RPC and asked the head nurses to distribute the survey to nurses who met the requirements of the target group. Information sheets and consent sheets were sent to each unit through the mail, and the investigator obtained informed written consent from the participants. The sample size was set at 28, based on the number of eligible nurses provided by the NICU head nurse.

The researchers obtained written informed consent from eligible DPNs in each unit. The researchers distributed questionnaires to the head nursing officer in each unit and asked them to distribute the questionnaires to the eligible DPNs in their units. The completed questionnaires were returned to the investigator via mail.

Data Collection Tools

A pre-tested, standard, self-administered questionnaire was used. The questionnaire collected demographic data, professional experience, and years of experience as a NICU nurse and as a DPN. To assess the current discharge planning process, questions on the following aspects were included in the questionnaire:

1. Attributes
2. The DPNs' discharge planning ability was

measured using the Japanese version of the Nurses' Discharge Planning Ability Scale (J-NDPAS), which has been tested and validated (Tomura, et al., 2013). This scale comprises the following four subscales:

- Subscale 1: Ability to carry out informed consent with the patient and family. (seven items)
- Subscale 2: Ability to balance care after estimating the date of discharge. (six items)
- Subscale 3: Ability to balance care after discharge. (six items)
- Subscale 4: Ability to prepare for the shift of medical treatment (five items)

The answers to each item were measured on a 5-point scale: 1 = not at all; 2 = poor; 3 = neither good nor bad; 4 = good; and 5 = well done. For each item, the mean values of the responses were calculated. Adjustments were made to the original scale with the permission of the developer (Prof. Tomura) to make the scale applicable to the NICU setting. The words "care" and "care manager" were changed to "child-rearing" and "social worker," respectively. In addition, the expressions were changed in this study, and the reliability was examined in each subscale.

3. The status and perception of hospital discharge support

- Availability of learning, consultation opportunities, and difficulties related to hospital discharge support (yes or no)
- Perceptions of the importance of discharge planning, answered on a scale of 1 (not conscious at all) to 5 (always conscious).
- Level of satisfaction with their job, measured on a scale of 1 (strongly disagree) to 5 (strongly agree).

Ethical considerations

The study was approved by the Institutional Research Ethics Committee of the authors' affiliated institution. All participants provided written informed consent. It was ensured that participation was voluntary and that anonymity was maintained. (Approved in April 2015)

Data Analysis

Demographics and satisfaction levels were reported as mean (M) and standard deviation (SD) separately for perinatal medical centers and regional perinatal centers. For the discharge conference, the number of participants was tabulated. Since the J-NDPAS has been reworded, alpha coefficients were calculated for each subscale to check for reliability (Table 1). The J-NDPAS total score was divided into two groups based on the median score: a high-score group and a low-score group. Comparisons between the two groups were examined using the t-test for age and Fisher's direct probability test for the other items. Statistical analysis was performed using SPSS version 23 (IBM Corp., Armonk, NY, USA).

Table 1: Overview of discharge planning nurses (range) n=16

Characteristics (Range)	Perinatal Medical Center n=10		Regional Perinatal Center n=6	
	M	SD	M	SD
Basic Attributes				
Gender	All female		All female	
Age (27-57)	43.6±9.8		39.8±5.5	
Experience as a nurse	18.6±10.6 (5-35)		15.7±4.5 (10-21)	
Experience as a nurse at NICU	8.5±5.6 (1-17)		6.5±1.8 (4-9)	
Experience as a discharge planning nurse	6.3±5.7 (1-17)		3.9±2.0 (1-5)	
more than 1 year but less than 3 years	4		2	
more than 4 years but less than 5 years	3		1	
6 years to less than 10 years	1		3	
more than 10 years	2		0	
Provide full-time hospital discharge support	2		0	
Positions (Multiple responses)				
head nurse	5			
Assistant Chief Nurse	2		5	
discharge support nurse	5		1	
Nurses with other qualifications (Multiple responses)				
Case worker • Support Counseling Specialist	3		1	
Public health nurse	0		0	
Midwife	1		1	
Overview of the belonged hospital				
Number of Hospital Beds	(649-824)		(262-478)	
Number of Hospital Beds at NICU	(9-12)		(6)	
Number of Hospital Beds at GUC	(12-21)		(6-8)	
Average length of stay in hospital at NICU	(33.2-45)		(24.6)	
Average length of stay in hospital at GCU	(35.2-67.2)			

Results

The response rate was 86%. Of the 28 questionnaires sent, 24 nurses responded via mail. Out of the 24 responses, eight were deleted because their responses to J-NDPAS were incomplete. The analysis was conducted using the 16 complete responses. All the participants were women. Of the respondents, ten belonged to Perinatal Medical Centers (PMCs) and six belonged to Regional Perinatal Centers (RPCs).

Participant Demographic Characteristics

The mean age of the participants was 42.4±8.8 years (range 27–57). They had a mean of 17.5±8.8 years’ experience as a nursing professional; a mean of 7.7±4.5 years’ experience as a NICU nurse; and a mean of 5.4±4.7 years’ experience in NICU discharge planning.

The current positions or titles of the respondents were as follows: five discharge support staff, two head nurses, two deputy head nurses, four chief nurses, and four staff nurses, with 15 respondents holding concurrent positions and two holding part-time positions. (Table 1)

Table 2: Effectiveness of the guidebook – Paired t-test for each item of J-NDPAS (n=16)

Item of Subscale	Items of J-NDPAS	Perinatal Medical Center n=10		Regional Perinatal Center n=6	
		M	SD	M	SD
Subscale A- The capability to carry out agreed information with the patient and the family (α:.84)	1. When starting the support, image the overall picture and flow of support up to discharge at an early stage.	3.60	0.84	3.33	0.52
	2. Predicting medical management and daily life assistance that patient need after discharge.	3.70	0.67	3.50	0.84
	3. Predict the possibility of continuing childcare support by family, taking into account the patient’s post-discharge course.	3.40	0.70	3.67	1.03
	4. Understanding the living environment of patients after discharge.	3.60	0.84	3.67	1.03
	5. Quickly obtain information on medical institutions and home-visit nursing that can provide the medical care and care that patients need after discharge.	3.10	0.74	3.17	0.75
	6. Assess the medical care and care needed by the patient after discharge from the family with their child-rearing ability and local resources.	3.20	0.92	3.33	0.82
Subscale B- Capability to care balance after estimating the discharge (α:.76)	7. Confirm how the patient and family understand the patient’s medical condition and progress after discharge.	3.50	0.71	3.67	0.52
	8. Understanding the anxiety associated with the discharge of a patient/family.	3.80	0.42	3.83	0.41
	9. Provide information so that patients and their families can understand the burden of childcare after discharge from the hospital.	3.60	0.70	3.33	0.82
	10. Find out if the family is ready to take care of children.	3.80	0.63	4.67	0.52

	11. Create a feasible support plan in consideration of the patient's/family's intentions.	3.60	0.84	3.83	0.98
	12. Encourage patients and their families to make proactive decisions about discharge plans and preparations.	2.90	0.74	3.17	0.98
	13. Adjust if there is a difference between the intentions of the patient/family and the policy of the hospital staff.	3.50	0.53	3.50	0.84
Subscale C- Capability to care balance after discharge adjustments (α :.73)	14. Coordinate medical management and care during hospitalization with hospital staff to reduce the burden on patients and their families after discharge.	3.60	0.52	3.33	0.82
	15. You and your hospital staff will help the patient and their family maximize their independence (ADL and self-care skills) during their stay in the hospital.	3.10	0.88	3.50	1.05
	16. Devise instruction methods with the staff inside and outside the hospital to make it easier for patients and families to learn medical management and care techniques.	3.30	1.25	3.33	0.52
	17. Depending on the patient's situation, select the necessary members from the hospital staff for hospital discharge support.	3.10	1.10	3.83	0.75
	18. Share hospital discharge goals among hospital staff involved in patient discharge support.	3.60	0.70	3.17	0.98
	19. Adjust local staff to master inexperienced medical management and care skills.	2.50	1.18	3.33	0.52
Subscale D- Capability to make shift preparation of a medical treatment place (.71)	20. When using the medical and welfare systems, arrange necessary procedures, taking into account the time required for accreditation.	3.50	0.97	3.00	0.89
	21. Timely securing of medical institutions and home-visiting nursing that can perform necessary medical management and care after discharge.	3.40	0.97	3.17	0.75
	22. Coordinate with family and consulting support specialists so that the post-discharge treatment environment can be prepared before discharge.	3.90	0.57	4.00	0.63
	23. Depending on the patient's condition, select the means to transfer the patient to their home when leaving the hospital.	3.80	0.63	4.33	0.52
	24. To achieve the purpose of the joint conference, I arranged for patients, families, and necessary staff inside and outside the hospital to participate.	3.90	0.74	4.17	0.41
total Score (α :.91)		13.9	2.04	14.3	1.38

Table 3: Relationship between J-NDPAS scores, DPN experience, and perceptions of discharge support (n=16)

J-NDPAS	High score group n=8	Low score group n=8	t	p-value
	n(%)orM±SD	n(%)orM±SD		
Age ^a	43.9±9.3	40.9±8.56	0.73	0.513
(Range)	range (30–56)	range (27–57)		
Experience as a nurse (years) ^b	20.6±9.6	14.7±6.6		
(17.5<)	H i g h 5(62.5)	3 (37.5)		0.619
(≤17.5)	L o w 3(37.5)	5 (62.5)		
Experience as a nurse at NICU ^b	7.8±5.1	7.6±3.9		
(7<)	H i g h 4(66.7)	2 (33.3)		0.608
(≤7)	L o w 4(40.0)	6 (60.0)		
Experience as a discharge planning nurse ^b	5.0±5.2	5.8±4.2		
<)	H i g h(5 4(57.1)	4 (42.9)		1.00
(≤5)	L o w 4(44.4)	5 (55.6)		
Learning opportunity on NICU discharge adjustment ^b				
	Yes 2(22.2)	7(77.8)		0.041*
	No 6(85.3)	1(14.3)		
Place to consult about discharge planning adjustment ^b				
	Yes 6(46.2)	7(53.8)		1.00
	No 2(66.7)	1(33.3)		
Having difficulty when coordinating with multiple occupations ^b				
	Yes 6(46.2)	7(53.8)		1.00
	No 2(66.7)	1(33.3)		
Job Satisfaction ^b	3.9±1.0	3.0±0.5		
	High 6(85.7)	1(14.3)		0.041*
	Low 2(22.2)	7(77.8)		

a: Independent t-test b: Fisher's exact test SD: standard deviation * $p < 0.05$

Status of Discharge Support Conferences

Among the nurses who responded to the survey, 14 (88% PMC: 9, RPC: 5) had held a joint pre-discharge conference. The main participants at the conference were the following: primary nurses (PMC: 9, RPC: 6), family members (PMC: 9, RPC: 5),

caseworkers (PMC: 8, RPC: 6), public health nurses (PMC: 7, RPC: 6), physicians (PMC: 9, RPC: 5), child advocacy specialists (PMC: 6, RPC: 7), head nurses (PMC: 8, RPC: 0), and home care/in-home nurses (PMC: 8, RPC: 0).

The following are PMC-only participants and numbers: patient (3), social welfare council (3), child development support facilities (3), home-helpers (2), physical, occupational and speech-language-hearing therapists (2), pediatric nurses (2), family physicians (1), municipal welfare officers for the disabled (1), and outpatient nurses (1)

Participants' perceptions of the importance of Discharge Support and Job Satisfaction

Regarding the importance of discharge support, nine nurses (56%) answered "very much so," four nurses (25%) answered "fairly much so," and three nurses (19%) answered "agree," indicating that all nurses recognized the importance of discharge support. When asked about their satisfaction with discharge support, 14 (88%) of the respondents recognized its importance, including two (13%) who "very much agree," five (31%) who "fairly agree," and seven (44%) who "agreed." Most nurses felt that their work was worthwhile, and their overall perception of importance was high.

Difficulties, Learning, and Consultation Opportunities

Of the 16 nurses, 13 (81%) responded that they had experienced difficulty in coordinating with the interdisciplinary team regarding discharge. To the question, "Did you have any chance to learn about discharge planning for NICU hospitalized children?" nine (56%) answered "yes," seven (44%) answered "no." Of the 16 nurses, 13 (81%) had a place to consult about discharge planning.

Discharge Planning Ability of NICU nurses

The means and standard deviations of each item of the J-NDPAS for the perinatal medical center and the regional perinatal center are shown in Table 2. For the perinatal medical center, the items with the highest mean scores were "22. Coordinate with families and care support specialists (care managers) to prepare the post-discharge care environment before discharge (3.90±0.57)" and "24. Coordinate the participation of patients, families, and necessary staff inside and outside the hospital to achieve the purpose of the joint conference (3.90±0.74)." The two with the lowest scores were "19. Adjust local staff to master inexperienced medical management and care skills (2.50±1.18)" and "12. Encourage patients and their families to make proactive decisions about discharge plans and preparations (2.90±0.74)."

In the regional perinatal medical center, in descending order of the mean score, the items with the highest mean scores were "10. Make sure the family is ready to take care of the child (4.67±0.52)" and "23. Depending on the patient's condition, choose the means to transfer the child to the home upon discharge (4.33±0.52)." On the other hand, the item with the lowest mean score was "20. When using the medical and welfare systems, take

necessary procedures into consideration the time required for certification (3.00±0.89)."

Participants' characteristics related to J-NDPAS scores

Table 3 shows the characteristics associated with the two groups with high and low J-NDPAS scores. The mean age at the time of the survey was 43.6 years for the high-score group and 39.8 years for the low-score group. There were no statistically significant differences for age, years of clinical experience, years of experience in the NICU, or years of experience in discharge support.

Although there was no statistically significant difference between the two groups in terms of the availability of a counselor and perceptions of difficulties in discharge support, 14 nurses had learning opportunities and 14 nurses had perceptions of difficulties in support.

On the other hand, there was a statistically significant difference between the two groups regarding the learning opportunities for discharge support and job satisfaction. In the group with the high J-NDPAS score, six (75%) had no learning opportunities, whereas seven (77.8%) nurses had the opportunity to learn but had a low J-NDPAS score. In the group with a high J-NDPAS score, six (85.7%) felt rewarded, whereas seven (77.8%) in the group with low scores also had a low perception of reward.

Discussion

In this study, we identified the current discharge support practices of DPNs in NICUs. The DPNs were characterized as having 6.26 years of discharge support experience in perinatal medical centers and 3.88 years in regional perinatal centers. This was 0.7 to 3 years longer than the average of 3.1 years in the results of a national survey of DPNs at medical centers with more than 100 illnesses conducted in 2014 (Tomura, et al., 2017). This study was conducted after the 2010 revision of medical fees and the construction of the national guidelines for the improvement of the perinatal care system and five years after the placement of NICU inpatient support coordinators in Niigata Prefecture. At the perinatal medical center, DPN activities had started before that time, and the staff in charge were found to be building their careers. In both centers, there were many cases of DPNs who had worked in the NICU department before becoming DPNs, suggesting that there is a possibility that new DPNs will be appointed from among the NICU staff following the establishment of the "additional hospital discharge support" program. In this survey, 13 respondents (81.1%) experienced difficulties in providing discharge support. Other survey results have reported that DPNs in NICUs have higher difficulties, especially in coordinating with multiple professionals.

In our study, we found that nurses who scored high on the J-NDPAS felt high job satisfaction,

whereas nurses who scored low tended to feel low job satisfaction. Previous studies have shown that nurses' job satisfaction is associated with improved patient outcomes and quality of care (Boamah, et al., 2018). Nurse-led discharge planning programs have been shown to increase nurses' and families' satisfaction (Wilson Smith, et al., 2018).

It was reported that staff conferences as a collaborative learning strategy for nurses (Arroyo, et al., 2008; Suzuki, et al., 2012) were important to overcome the difficulties of DPN. Conferences have been reported to have a positive impact on nurses' attitudes toward the discharge planning process, interdisciplinary communication and collaboration, and knowledge of patients' post-discharge care. The system of community-based comprehensive care for children is underdeveloped, unlike the system of community-based comprehensive care for the elderly. In particular, support for hospital discharge is complicated because of unclear coordinators and large regional disparities. In addition, because the number of support cases is very small, it is very difficult to gain experience in this field. Therefore, it is important to reduce the difficulties of discharge support for DPNs.

In addition, nurses with high J-NDPAS scores showed a tendency to have no place for consultation, whereas nurses in the low score group had a place for consultation. The average number of years of experience of the nurses in the high-score group was 20.6 years, and that of the low-score group was 14.7 years. Although there was no statistically significant difference, it was inferred that some nurses in the high-score group were able to cope with the complex process of discharge support and were responsible for solving problems on their own.

Regular evaluation of the practical skills of DPNs in the NICU is required in the future. In addition, it has been reported that the ability to coordinate post-discharge care is related to the DPN's years of experience, whether or not they have experience in home nursing, and whether they conduct self-improvement activities such as reviewing cases in which they have provided discharge support (Prof Tomura). It is important to provide opportunities for training programs at home and in the community to support the career development of DPNs.

Limitations

This study has some limitations. The results may not apply to other cultural groups outside Japan. Moreover, the J-NDPAS scale was originally tested and validated in an older adult population. Although adjustments were made to the original scale to make it applicable to the NICU setting, this may have affected the validity of the results measured by the J-NDPAS.

Conclusion

This study clarified the characteristics of discharge support in the NICU and the actual situation of practical skills. The results showed that

the number of years of experience among the DPNs here was longer than that of DPNs in general medical institutions with more than 100 diseases. Of the 16 respondents, 80% experienced difficulties with discharge support. Eighty percent of the respondents indicated that there was a place for consultation on discharge support, and 40% indicated that there was no opportunity for learning. Awareness of the importance of discharge support was high.

The mean score of the J-NDPAS scale in the NICU was 13.9 ± 2.0 in the perinatal medical center and 14.3 ± 1.4 in the regional perinatal center, and the discharge practice score was lower in the perinatal medical center. This was assumed to be related to the complexity of supporting cases at the Perinatal Medical Center and the underdeveloped system of supporting children's discharge.

There was a significant difference in the characteristics associated with high and low J-NDPAS scores in terms of the opportunity to learn about discharge support and satisfaction with discharge support. Furthermore, DPNs require a lot of professional experience to conduct efficient discharge planning activities in NICUs.

Recommendations

Further studies on this topic are needed with a larger sample size representing a wider geographical area. Although we have identified gaps in the current discharge planning practices of NICU DPNs, to plan effective interventions and educational opportunities to fill those gaps, it is important to study DPN's perceptions in depth. Therefore, survey-based and qualitative studies on this topic should be conducted in the future.

Our study identified the most popular difficulties among NICU DPNs. However, nurses may have issues other than the difficulties mentioned above. Further studies are needed to identify and clarify the challenges faced by the DPNs during the discharge planning process and when bringing their perception into real practice in the NICU.

Developing and validating self-evaluating tools for NICU nurses will help them to ensure quality care and increase nurse satisfaction.

Acknowledgments: We would like to express our sincere gratitude to all medical institutions for their cooperation in the survey.

Funding: This research was supported by a Grant-in-Aid for Scientific Research on Fundamental Research C from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan (2015–2019).

Conflict of Interest: The authors have no conflicts of interest to declare.

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